Amendments to the Specification:

Please replace paragraph [0012] with the following amended paragraph:

[0012] The objects stated above will be achieved by a novel laminated free layer configuration within a CPP synthetic spin valve design and/or a novel laminated pinned layer configuration. The free layer comprises layers of CoFe or CoFe laminated on Cu (CoFe when used hereinafter will refer specifically to $Co_{90}Fe_{10}$ of approximately 5 angstroms thickness, interspersed with very thin layers (called lamina herein, because of their thinness) of FeCo (specifically $Fe_{50}Co_{50}$) of less than 3 angstroms but preferably approximately 0.5 angstroms thickness. While the examples discussed below will all use $Fe_{50}Co_{50}$, the same advantages of the present invention can be obtained by using layers of any of the Fe-rich ferromagnetic alloys $Co_{75}Fe_{25}$, $Co_{70}Fe_{30}$, $Co_{60}Fe_{40}$, $Co_{65}Fe_{35}$ or more generally Co_xFe_{1-x} with x between 0.25 and 0.75. Therefore, when the symbol FeCo is used hereinafter, it will refer to layers of the Fe-rich ferromagnetic alloys such as $Co_{75}Fe_{25}$, $Co_{70}Fe_{30}$, $Co_{60}Fe_{40}$, $Co_{65}Fe_{35}$ or, more generally ~~Co_xFe_{1-x}~~ $\underline{Co_xFe_{100-x}}$ with x between [[0.25]] <u>25</u> and [[0.75]] <u>75</u> .

Please replace paragraph [0020] with the following amended paragraph:

[0020] The first layer of this free layer is a first layer of CoFe (22) formed to a thickness between approximately 5 and 15 angstroms, with approximately 10 angstroms being preferred. On this layer is formed an ultra- thin layer (referred to hereinafter as a lamina) of FeCo (24) of thickness less than 3 angstroms, with approximately 0.5 angstroms being preferred. In all the following examples, FeCo refers specifically to $Fe_{50}Co_{50}$, of thickness less than 3 angstroms, with approximately 0.5 angstroms being preferred; but as has been noted above, more generally $\cancel{Co_xFe_{1-x}}$ $\underline{Co_xFe_{100-x}}$ with x between [[0.25]] 25 and [[0.75]] 75 can be used to fulfill the objects of the invention. On this lamina is formed a second layer of CoFe (26) of thickness between approximately 2.5 and 7.5 angstroms, with approximately 5 angstroms being preferred. On this layer is formed a Cu layer (28) of thickness between approximately 1 and 4 angstroms, with approximately 2 angstroms being preferred. The non-magnetic Cu layer acts as a spacer layer and has been experimentally shown to have beneficial effects on the magnetic performance parameters of ferromagnetic layers grown upon it and to allow the advantageous adjustment of magnetostriction values and GMR enhancement. On this Cu layer is formed a third layer of CoFe (30) of thickness between approximately 2.5 and 7.5 angstroms, with approximately 5 angstroms being preferred. On this CoFe layer there is formed a second lamina of FeCo (32) of thickness less than 3 angstroms, with approximately 0.5 angstroms being preferred. On this lamina is formed a second layer of Cu (33) of thickness between approximately 1 and 4 angstroms, with approximately 2 angstroms being preferred. On this Cu layer is formed a fourth layer of CoFe(34) of thickness

between approximately 2.5 and 7.5 angstroms, with approximately 5 angstroms being preferred. Testing of this configuration indicates a coefficient of magnetostriction, $\lambda=+9.00 \times 10^{-7}$ and a coercivity, $H_c=13$.

Please replace paragraph [0027] with the following amended paragraph:

[0027] Referring next to Fig. 3c, there is shown the performance of a free layer formed in accord with the present invention:

CoFe(10)/FeCo(0.5)/Cu(2)/FeCo(0.5)/CoFe(10)/FeCo(0.5)/Cu(2)/FeCo(0.5)/CoFe(10).

As can be seen in the graph, the GMR ratio is quite similar to that displayed by the pure FeCo free layer (Fig. 3b), while the coercivity is comparable to that of the CoFe/Cu free layer of Fig. 3a. Specifically, the GMR ratio is 2.22% and the coercivity is 5.9 Oe. Referring next to Fig.4a, there is shown a schematic cross-sectional view of a synthetic antiferromagnetic pinned layer such as is illustrated in prior art Fig. 1 as layer (48), but having one layer (the AP1 layer) formed in accord with the present invention. Referring again to Fig. 1, it is seen that the two ferromagnetic layers forming the pinning layer are designated AP1 (54) and AP2 (50), with AP1 being closest to the free layer. The present invention provides a laminated structure for the AP1 layer, utilizing FeCo layers in a thickness range between approximately 5 and 15 angstroms, with 10 angstroms being preferred, in place of the prior art CoFe layers. Note that the FeCo layers could also be layers of the Fe-rich ferromagnetic alloys $Co_{75}Fe_{25}$, $Co_{70}Fe_{30}$, $Co_{60}Fe_{40}$, $Co_{65}Fe_{35}$ or more

generally ~~Co_xFe_{1-x}~~ $\underline{Co_xFe_{100-x}}$ with x between [[0.25]] 25 and [[0.75]] 75. To this structure there is added thin layers of Cu, in a thickness range between 1 and 4 angstroms with approximately 2 angstroms being preferred. This new structure produces greatly improved sensor performance. Note, we are using the more generic term "layer" to describe the thicker FeCo layers in the pinned layer as opposed to our use of "lamina" as a distinguishing term to describe the ultra-thin layers of FeCo used in forming the free layer of the sensor.